

Amino Acid Sequence of the Composite $\mbox{HCV}_{\mbox{HC-J1/CDC/CHI}}$

					5					10					15
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16	Met	ser	Tar	115	Pro Gla	195	Wa'	Tire	Dha	TAR	Glad	CI v	aig Giv	Gl =	Tla
1.0	77a l	A19	G1 11	727	Tyr	Tan	T.a.	272	3-7-7	3-2	Gly	Dro	3-0	Lau	Glv
45	Va.	3-2	212	4.7	Arg	Lvs	The	Ser	Glu	Ara	Ser	Gln	PEO	Are	GIV
61	3	7-2	Gla	2-0	Ile	Pro	Lvs	Val	Ard	Arg	Pro	Glu	Gly	Arg	Thr
75	T	Ala	Gla	Pro	Gly	mv-	210	Tro	210	Leu	TVI	Gly	Asn	Glū	Gly
91	Cvs	Glv	TED	Ala	Gly	TID	Leu	Leu	Ser	Pro	Arq	Gly	Ser	Arg	Pro
106	Ser	Tru	Gly	PIO	The	Aso	Pro	Arq	Arq	Arq	Ser	Arq	Asn	Leu	Gly
121	Lvs	Val	ile.	Aso	Thr	Leu	Thr	Cys	Gly	Phe	Ala	Asp	Leu	Met	Gly
136	TVI	Ile	Pro	Leu	Val	Gly	Ala	Pro	Leu	Gly	Gly.	Ala	Ala	Arg	Ala
151	Leu	Ala	His	Gly	Val	Arg	Val	Leu	Glu	Asp	Gly	Val	Asn	Tyr	Ala
166	Thr	Gly	Asa	Leu	Pro	Gly	Cys	Ser	Phe	Ser	Ile	Phe	Leu	Leu	Ala
181	Leu	Leu	Se:	Cys	Leu	The	Val	220	Ala	Ser	ALE	TYT	GTU	val	Arg
196	Asn	Ser	Thi	GLY	Leu		mls =:-	Vai	Thr	ASE	ASD	Cys	310	ASR	Glu
211	Ser	110	75.V	Tyr	Glu	ALZ	215	ASD	344	116	Leu	3-5	2112 C112	10-20 2-0	Wal.
240	Cys	Val	210	CAR	Val The	Mag Wal	313	44-	3-4	100	Glu	Tve	Cys	2-7	Ala
255	Th-	Gla	Tair	3	Arg	WG.	Tla	1 5 5	7.411	Lan	Val	Cl v	Ser	110	The
271	T. = 11	CAZ	Sar	312	Leu	TVI	Val	Glv	Asp	Leu	Cvs	Glv	Sei	Val	Phe
286	Leu	Ila	Gly	Gla	Leu	Phe	Thr	Phe	Ser	Pro	Ard	Arg	Eis	TID	The
301	The	Gln	Gly	Cvs	Asn	Cys	Ser	Ile	TVT	Pro	Glv	Eis	Ile	Thr	Gly
316	His	Ara	Met	Ala	TTD	Asp	Met	Met	Met	Asa	Tro	Ser	210	Thr	Ala
331	Ala	Leū	Val	Met	Ala	Gln	Leu	Leu	Arg	Ile	PIO	Gln	Ala	Ile	Leu
346	Asp	Met	Ile	Ala	GLy	Ala	His	Trp	Gly	Val	Lau	Ala	Gly	Ile	Ala
					Val										
					Gly										
					Ala										
400	GTA	Ala	Lys	Gin	Asn	Ile	GLn	Leu	Ile	Asn	Thr	Asn	GTĀ	Ser	TIP
					Thr										
450	Cly	Tip	Leu	ALA	GTA	Leu	116	ZYI	GIR	HLS	Lys	Fne	ASR	Ser	Ser
455	GLY	Cys	Gly	T-n	Alg	750	TIA	ser	Cys	AIG	PIG	Clu	Sar	ASD	Phe Pro
															Gly
496	Ila	Val	Pro	Ala	Lvs	Ser	Val	Cvs	Gly	ם בם	Val	W4-	Cvs	Phe	Thr
511	PTO	Ser	Pro	Val	Val	Val	Glv	Thr	The	Aso	Ard	Ser	Giv	Ala	Pro
526	Thr	Tvr	Ser	TID	Gly	Glu	Asn	Aso	The	Aso	Val	Phe	Val	Leu	Asn
541	Asn	Thr	Arg	220	Pro	Leu	Gly	Asn	Trp	Phe	Gly	Cvs	The	Trp	Met
556	Asn	Ser	Thr	Gly	Phe	Thr	Lys	Val	Cvs	Glv	Ala	Pro	210	Cys	Val
571	Ile	Gly	Gly	Ala	Gly	Asa	Asn	Thr	Leu	His	Cys	PIO	The	Asp	Cys
586	Phe	Arq	Lys	His	520	Aso	Ala	Thr	Tvr	Ser	Arc	Cvs	Glv	Ser	Gly
601	PIO	Sib	Ile	# 12 m	310	Arg	Cys	Lau	Val	Asp	Tym	Pro	Tyr	yis	Leu
610	TIP	His	Tyr	Pro	Cys	The	Ile	Asn	Tyr	Thr	Ile	Phe	Lys	Ile	Arg
645	met T	Tyr	vai	GIV	9-7	vai	Gin	115	yrg	Leu	Glu	Ala	Aia	Cys	Asn
661	7.25	In:	224	27.0	7 0	AIG	Lys	ASD ml	Leu	07A	Asp	Arg	AS0	Arg	Ser Leu
676	3-0	Care Tegg	5e=	270	サード	75 U	Tan	200	202	Tar	GTU	TIP	GTU	val	Ile
691	H : 5	C 2 3	E .	Gin	3 < -	Tla	Val	120	Ein.	Leu Cl-	ser T	Ini	073		Val
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706 Gly Ser Ser Ile Ala Ser Trp Ala Ile Lys Trp Glu Tyr Val Val
   721 Leu Leu Phe Leu Leu Ala Asp Ala Arg Val Cys Ser Cys Leu
   736 Trp Met Met Leu Leu Ile Ser Gln Ala Glu Ala Ala Leu Glu Asn
  751 Leu Val Ile Leu Asn Ala Ala Ser Leu Ala Gly Thr His Gly Leu
  766 Val Ser Phe Leu Val Phe Phe Cys Phe Ala Trp Tyr Leu Lys Gly
  781 Lys Trp Val Pro Gly Ala Val Tyr Thr Phe Tyr Gly Met Trp Pro
  796 Leu Leu Leu Leu Leu Ala Leu Pro Gln Arq Ala Tyr Ala Leu
  811 Asp Thr Glu Val Ala Ala Ser Cys Gly Gly Val Val Leu Val Gly
  826 Leu Met Ala Leu Thr Leu Ser Pro Tyr Tyr Lys Arg Tyr Ile Ser
  841 Trp Cys Leu Trp Trp Leu Gln Tyr Phe Leu Thr Arg Val Glu Ala
  856 Gln Leu His Val Trp Ile Pro Pro Leu Asn Val Arg Gly Gly Arg
  871 Asp Ala Val Ile Leu Leu Met Cys Ala Val His Pro Thr Leu Val
  886 Phe Asp Ile Thr Lys Leu Leu Ala Val Phe Gly Pro Leu Trp
  901 Ile Leu Asp Ala Ser Leu Leu Lys Val Pro Tyr Phe Val Arg Val
  916 Gln Gly Leu Leu Arg Phe Cys Ala Leu Ala Arg Lys Met Ile Gly
  931 Gly His Tyr Val Gln Met Val Ile Ile Lys Leu Gly Ala Leu Thr
946 Gly Thr Tyr Val Tyr Asn His Leu Thr Pro Leu Arg Asp Trp Ala
  961 His Asn Gly Leu Arg Asp Leu Ala Val Ala Val Glú Pro Val Val 976 Phe Ser Gln Met Glu Thr Lys Leu Ile Thr Trp Gly Ala Asp Thr
  991 Ala Ala Cys Gly Asp Ile Ile Asn Gly Leu Pro Val Ser Ala Arg
 1006 Arg Gly Arg Glu Ile Leu Leu Gly Pro Ala Asp Gly Met Val Ser
 1021 Lys Gly Trp Arg Leu Leu Ala Pro Ile Thr Ala Tyr Ala Gln Gln
 1036 Thr Arg Gly Leu Leu Gly Cys Ile Ile Thr Ser Leu Thr Glv Arg
 1051 Asp Lys Asn Gln Val Glu Gly Glu Val Gln Ile Val Ser Thr Ala
 1066 Ala Gln Thr Phe Leu Ala Thr Cys Ile Asn Gly Val Cys Trp Thr
 1081 Val Tyr His Gly Ala Gly Thr Arg Thr Ile Ala Ser Pro Lys Gly 1096 Pro Val Ile Gln Met Tyr Thr Asn Val Asp Gln Asp Leu Val Gly
 1111 Trp Pro Ala Pro Gln Gly Ser Arg Ser Leu Thr Pro Cys Thr Cys
· 1126 Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg His Ala Asp Val Ile
 1141 Pro Val Arg Arg Arg Gly Asp Ser Arg Gly Ser Leu Leu Ser Pro
 1156 Arg Pro Ile Ser Tyr Leu Lys Gly Ser Ser Gly Gly Pro Leu Leu
 1171 Cys Pro Ala Gly His Ala Val Gly Ile Phe Arg Ala Ala Val Cys 1186 Thr Arg Gly Val Ala Lys Ala Val Asp Phe Ile Pro Val Glu Asn
 1201 Leu Glu Thr Thr Met Arg Ser Pro Val Phe Trp Asp Asn Ser Ser
 1216 Pro Pro Val Val Pro Gln Ser Phe Gln Val Ala His Leu His Ala
1231 Pro Thr Gly Ser Gly Lys Ser Thr Lys Val Pro Ala Ala Tyr Ala 1246 Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro Ser Val Ala Ala 1261 Thr Leu Gly Phe Gly Ala Tyr Met Ser Lys Ala His Gly Ile Asp 1276 Pro Asn Ile Arg Thr Gly Val Arg Thr Ile Thr Thr Gly Ser Pro 1291 Ile Thr Tyr Ser Thr Tyr Gly Lys Phe Leu Ala Asp Gly Gly Cys 1306 Ser Gly Gly Ala Tyr Asp Ile Ile Ile Cys Asp Glu Cys His Ser 1321 Thr Asp Ala Tyr Asp Ile Ile Ile Cys Asp Glu Cys His Ser
 1321 Thr Asp Ala Thr Ser Ile Leu Gly Ile Gly Thr Val Leu Asp Gln
 1336 Ala Glu Thr Ala Gly Ala Arg Leu Val Val Leu Ala Thr Ala Thr
 1351 Pro Pro Gly Ser Val Thr Val Pro His Pro Asn Ile Glu Glu Val
 1366 Ala Leu Ser Thr Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala Ile
 1381 Pro Leu Glu Val Ile Lys Gly Gly Arg His Leu Ile Phe Cys His
 1396 Ser Lys Lys Lys Cys Asp Glu Leu Ala Aia Lys Leu Val Ala Leu
 1411 Gly Ile Asn Ala Val Ala Tyr Tyr Arg Gly Leu Asp Wal Ser Val
 1426 Ile Pro Thr Ser Gly Asp Val Val Val Ala Thr Asp Ala Leu
1441 Met Thr Gly Tyr Thr Gly Asp Phe Asp Ser Val Ile Asp Cys Asn 1456 Thr Cys Val Thr Gln Thr Val Asp Phe Ser Leu Asp Pro Thr Phe
 1471 Thr lie Glu Thr Ile Thr Leu Pro Gln Asp Ala Val Ser Arg Thr
 1486 Gln Arg Arg Gly Arg Thr Gly Arg Gly Lys Pro Gly Ile Tyr Arg
 1501 Phe Val Ala Pro Gly Glu Arg Pro Ser Gly Met Phe Asp Ser Ser
 1516 Val Leu Cys Glu Cys Tyr Asp Ala Gly Cys Ala Trp Tyr Glu Leu
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1531 The Pro Ala Glu The The Val Arg Leu Arg Ala Tyr Met Asn The 1546 Pro Gly Leu Pro Val Cys Gln Asp His Leu Glu Phe Trp Glu Gly 1561 Val Phe The Gly Leu The His Ile Asp Ala His Phe Leu Ser Gln
 1576 Thr Lys Gly Ser Gly Glu Asn Leu Pro Tyr Leu Val Ala Tyr Gln 1591 Ala Thr Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser Trp Asp
 1606 Gln Met Trp Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His Gly
 1621 Pro Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Ile
 1636 Thr Leu Thr His Pro Val Thr Lys Tyr Ile Met Thr Cys Met Ser
 1651 Ala Asp Leu Glu Val Val Thr Ser Thr Trp Val Leu Val Gly Gly
 1666 Val Leu Ala Ala Leu Ala Ala Tyr Cys Leu Ser Thr Gly Cys Val
 1681 Val Ile Val Gly Arg Val Val Leu Ser Gly Lys Pro Ala Ile Ile
 1696 Pro Asp Arg Glu Val Leu Tyr Arg Glu Phe Asp Glu Met Glu Glu
 1711 Cys Ser Gln Ris Leu Pro Tyr Ile Glu Gln Gly Met Met Leu Ala
 1726 Glu Gln Phe Lys Gin Lys Ala Leu Gly Leu Leu Gln Thr Ala Ser
 1741 Arg Glm Ala Glu Val Ile Ala Pro Ala Val Glm Thr Asm Trp Glm 1756 Lys Leu Glu Thr Phe Trp Ala Lys His Met Trp Asm Phe Ile Ser
 1771 Gly Ile Gln Tyr Leu Ala Gly Leu Ser Thr Leu Pro Gly Asn Pro 1786 Ala Ile Ala Ser Leu Met Ala Phe Thr Ala Ala Val Thr Ser Pro
 1801 Leu Thr Thr Ser Gla Thr Leu Leu Phe Asa Ile Leu Gly Gly Trp
 1816 Val Ala Ala Gin Leu Ala Ala Pro Gly Ala Ala Thr Ala Phe Val
 1831 Gly Ala Gly Leu Ala Gly Ala Ala Ile Gly Ser Val Gly Leu Gly
1845 Lys Val Leu Ile Asp Ile Leu Ala Gly Tyr Gly Ala Gly Val Ala
1861 Gly Ala Leu Val Ala Phe Lys Ile Met Ser Gly Glu Val Pro Ser
1876 Thr Glu Asp Leu Val Asn Leu Leu Pro Ala Ile Leu Ser Pro Gly
 1891 Ala Leu Val Val Gly Val Val Cys Ala Ala Ile Leu Arg Arg Eis
 1906 Val Gly Pro Gly Glu Gly Ala Val Gln Trp Met Asn Arg Leu Ile
1921 Ala Phe Ala Ser Arg Gly Asn His Val Ser Pro Thr His Tyr Val
1936 Pro Glu Ser Asp Ala Ala Ala Arg Val Thr Ala Ile Leu Ser Ser
1951 Leu Thr Val Thr Gln Leu Leu Arg Arg Leu His Gln Trp Ile Ser
1966 Ser Glu Cys Thr Thr Pro Cys Ser Gly Ser Trp Leu Arg Asp Ile
1981 Trp Asp Trp Ile Cys Glu Val Leu Ser Asp Phe Lys Thr Trp Leu
1996 Lys Ala Lys Leu Met Pro Gln Leu Pro Gly Ile Pro Phe Val Ser
2071 The Arg Leu Pro Ala Pro Asn Tyr The Phe Ala Leu Trp Arg Val
2086 Ser Ala Glu Glu Tyr Val Glu Ile Arg Gln Val Gly Asp Phe His
2101 Tyr Val Thr Gly Met Thr Thr Asp Asn Leu Lys Cys Pro Cys Gln 2116 Val Pro Ser Pro Glu Phe Phe Thr Glu Leu Asp Gly Val Arg Leu
2131 His Arg Phe Ala Pro Pro Cys Lys Pro Leu Leu Arg Glu Glu Val
2146 Ser Phe Arg Val Gly Leu His Glu Tyr Pro Val Gly Ser Gln Leu
2161 Pro Cys Glu Pro Glu Pro Asp Val Ala Val Leu Thr Ser Met Leu
2176 Thr Asp Pro Ser His Ile Thr Ala Glu Ala Ala Gly Arg Arg Leu
2191 Ala Arg Gly Ser Pro Pro Ser Val Ala Ser Ser Ser Ala Ser Gln
2206 Leu Ser Ala Pro Ser Leu Lys Ala Thr Cys Thr Ala Asn His Asp
2221 Ser Pro Asp Ala Glu Leu Ile Glu Ala Asn Leu Leu Trp Arg Gln
2236 Glu Met Gly Gly Asn Ile Thr Arg Val Glu Ser Glu Asn Lys Val 2251 Val Ile Leu Asp Ser Phe Asp Pro Leu Val Ala Glu Glu Asp Glu
2266 Arg Glu Ile Ser Val Pro Ala Glu Ile Leu Arg Lys Ser Arg Arg 2281 Phe Ala Gln Ala Leu Pro Val Tro Ala Arg Pro Aso Tyr Asn Pro
2296 Pro Leu Val Glu Thr Trp Lys Lys Pro Asp Tyr Glu Pro Pro Val
2311 Val His Gly Cys Pro Leu Pro Pro Pro Lys Ser Pro Pro Val Pro
2326 Pro Pro Arg Lys Lys Arg Thr Val Val Leu Thr Glu Ser Thr Leu
2341 Ser Thr Ala Leu Ala Glu Leu Ala Thr Arg Ser Phe Gly Ser Ser
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2356 Ser Thr Ser Gly Ile Thr Gly Asp Ash Thr Thr Ser Ser Glu 2371 Pro Ala Pro Ser Gly Cys Pro Pro Asp Ser Asp Ala Glu Ser Tyr 2386 Ser Ser Met Pro Pro Leu Glu Gly Glu Pro Gly Asp Pro Asp Leu 2401 Ser Asp Gly Ser Trp Ser Thr Val Ser Ser Glu Ala Asn Ala Glu 2416 Asp Val Val Cys Cys Ser Met Ser Tyr Ser Trp Thr Gly Ala Cys 2431 Val Thr Pro Cys Ala Ala Glu Glu Gln Lys Leu Pro Ile Asn Ala 2446 Leu Ser Asn Ser Leu Leu Arg His His Asn Leu Val Tyr Ser Thr 2461 Thr Ser Arg Ser Ala Cys Gln Arg Gln Lys Lys Val Thr Phe Asp 2476 Arg Leu Gli Val Leu Asp Ser His Tyr Gln Asp Val Leu Lys Glu 2491 Val Lys Ala Ala Ala Ser Lys Val Lys Ala Asn Leu Leu Ser Val 2506 Glu Glu Ala Cys Ser Leu Thr Pro Pro His Ser Ala Lys Ser Lys 2521 Phe Gly Tyr Gly Ala Lys Asp Val Arg Cys His Ala Arg Lys Ala 2536 Val Thr His Ile Asn Ser Val Trp Lys Asp Leu Leu Glu Asp Asn 2551 Val Thr Pro Ile Asp Thr Thr Ile Met Ala Lys Asn Glu Val Phe 2566 Cys Val Gln Pro Glu Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile 2581 Val Phe Pro Asp Leu Gly Val Arg Val Cys Glu Lys Met Ala Leu 2596 Tyr Asp Val Val Thr Lys Leu Pro Leu Ala Val Met Gly Ser Ser 2611 Tyr Gly Phe Gln Tyr Ser Pro Gly Gln Arg Val Glu Phe Leu Val 2626 Gln Ala Trp Lys Ser Lys Lys Thr Pro Met Gly Phe Ser Tyr Asp 2641 Thr Arg Cys Phe Asp Ser Thr Val Thr Glu Ser Asp Ile Arg Thr 2656 Glu Glu Ala Ile Tyr Gln Cys Cys Asp Leu Asp Pro Gln Ala Arg 2671 Val Ala Ile Lys Ser Leu Thr Glu Arg Leu Tyr Val Gly Gly Pro 2686 Leu Thr Asn Ser Arg Gly Glu Asn Cys Gly Tyr Arg Arg Cys Arg 2701 Ala Ser Gly Val Leu Thr Thr Ser Cys Gly Asn Thr Leu Thr Cys 2716 Tyr Ile Lys Ala Arg Ala Ala Cys Arg Ala Ala Gly Leu Gln Asp 2731 Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val Val Ile Cys Glu 2746 Ser Ala Gly Val Gin Glu Asp Ala Ala Ser Leu Arg Ala Phe Thr 2761 Glu Ala Met Thr Arg Tyr Ser Ala Pro Pro Gly Asp Pro Pro Gln 2776 Pro Glu Tyr Asp Leu Glu Leu Ile Thr Ser Cys Ser Ser Asn Val 2791 Ser Val Ala His Asp Gly Ala Gly Lys Arg Val Tyr Tyr Leu Thr 2806 Arg Asp Pro Thr Thr Pro Leu Ala Arg Ala Ala Trp Glu Thr Ala 2821 Arg His Thr Pro Val Asn Ser Trp Leu Gly Asn Ile Ile Met Phe 2836 Ala Pro Thr Leu Trp Ala Arg Met Ile Leu Met Thr His Phe Phe 2851 Ser Val Leu Ile Ala Arg Asp Gln Leu Glu Gln Ala Leu Asp Cys 2866 Glu Ile Tyr Gly Ala Cys Tyr Ser Ile Glu Pro Leu Asp Leu Pro 2881 Pro Ile Ile Glm Arg Leu Gly Cys Pro Glu Arg Leu Ala Ser

Fig. 2

Antibody binding to individual peptides and various mixtures in an ELISA assay.

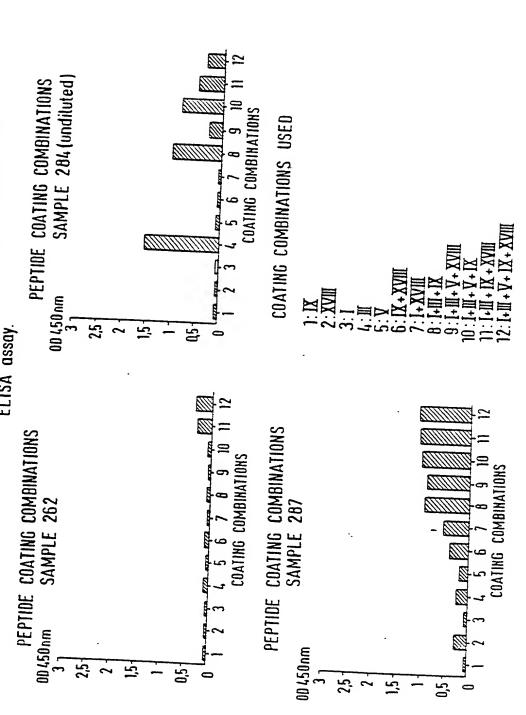


Fig. 2 Continued

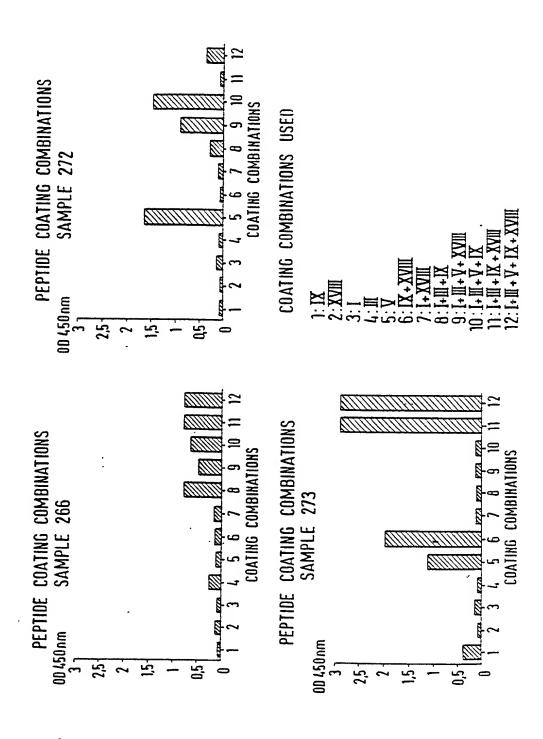


Fig. 2 Continued

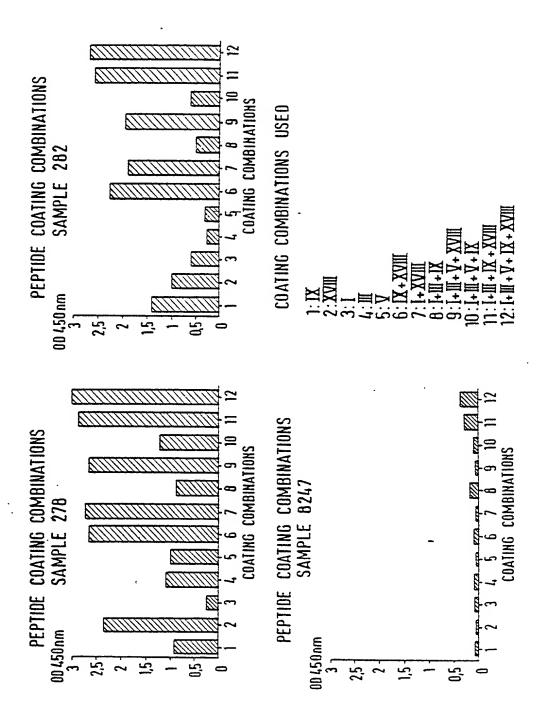


Fig. 2 Continued

